

## Injection therapy: Relieving pain at the source

If your pain is mostly in one particular spot, such as a joint or a trigger point in a specific muscle, your doctor may suggest injecting medication right into the site of your pain.

Such injections are usually a combination of a numbing agent, which provides immediate relief, and a corticosteroid. The steroid reduces inflammation and often can relieve your pain for several weeks or even months at a time.

Substances containing hyaluronic acid (Synvisc, Hyalgan) also can provide relief to arthritic joints, particularly knees. The products are similar to the lubricating material produced naturally in healthy joints. More lubrication often means less pain.

Before turning to injections, however, doctors usually try less invasive treatment methods first — such as oral medications and physical therapy.

### Who is it for?

Injection therapy is most often used for:

- **Trigger points.** Repetitive stress on a specific muscle can lead to trigger points — hard, painful knots located in taut bands of muscle. Common sites include the neck, shoulder and hip. *No corticosteroids are used* in these procedures. A local anesthetic is used to make the injection less painful.
- **Osteoarthritis.** This wear-and-tear type of arthritis most commonly affects joints in the hands, hips, knees, neck and lower back.
- **Rheumatoid arthritis.** An inflammatory disorder that occurs when the body is attacked by its own immune system, rheumatoid arthritis can affect some organs as well as joints. Joint deformities are common.
- **Tendonitis.** Tendons are the thick, fibrous cords that attach muscles to bone. Tendonitis is inflammation or irritation of a tendon and is typically caused by overuse. The most common sites are shoulders, wrists, heels and elbows.
- **Bursitis.** Bursae are fluid-filled pads located throughout the body that lubricate places where tendons or muscles pass over bony projections. Inflammation of a bursa is called bursitis, which most often occurs in shoulders, knees, elbows and hips.

## **How do you prepare?**

Usually no special preparation is necessary, although your doctor may ask you to refrain from taking any blood-thinning medications for a few days before the procedure, to reduce your chances of bleeding.

## **How is it done?**

There are many different structures around a joint that can cause pain. Is there a torn tendon? An inflamed bursa? Or damaged cartilage from arthritis? Each of these problems requires the medicine to be placed in a specific location.

The numbing agent included in most joint injections serves two purposes. In addition to making the injection itself less painful, the anesthetic can help verify proper placement of the needle. Your immediate relief of pain indicates the needle is in the right place.

A variety of substances have been used in trigger-point injections, including numbing agents, botulinum toxin (Botox), corticosteroids and other anti-inflammatory drugs. In some cases, pain relief occurs simply from the physical piercing of a trigger point with a needle — even when no medicine is injected.

## **What can you expect during the procedure?**

The procedure can be done in your doctor's office. Depending on the location of your pain, you will recline or sit in a way that allows the nearby muscles to be as relaxed as possible. Your skin may be numbed, but the injection itself may still be uncomfortable.

In trigger-point injections, you may feel a sharp pain or muscle twitching when the needle hits the knotted muscle. Your doctor may adjust the needle position and inject medicine into the knot from several different angles.

The anesthetic in the injection wears off in a few hours, and the corticosteroid usually takes a few days before it starts to work. In the interim, your injection site may be a little sore and swollen. An ice pack can help relieve those symptoms.

However, if these symptoms last longer or begin later than 48 hours after the injection or are associated with fever or chills, you may have an infection. A joint infection can become a very serious problem, requiring surgical drainage.

## **Results**

Injections into joints or trigger points can provide pain relief for months at a time. Often this period of pain relief can provide an opportunity to make progress with your physical therapy and rehabilitation goals. Even though the pain may be gone, continue to follow your doctor's activity instructions so that the area can heal optimally.

## Risks

Complications of injection therapy are rare. If the injection introduces bacteria, an infection can occur. Delayed treatment for a joint infection can destroy the joint's function.

Signs of an infection include:

- Fever of at least 100.4 F
- Injection site becomes red, swollen, tender or warm
- Fluid drains from injection site
- Injection site has an odor

Serious side effects more typically occur in people who are taking corticosteroid pills daily for long periods of time. Pills affect the entire body, while *corticosteroid injections* tend to work primarily at the injection site.

Still, doctors usually limit the number of corticosteroid injections you can receive within a given time period. Experts disagree, however, on what those limits should be — ranging from four injections per lifetime for a joint with osteoarthritis to one injection per month in joints severely affected by rheumatoid arthritis.

## Looking ahead

Injection therapies that are now in the experimental phase may become common treatments for arthritis within the next decade.

One intriguing field of study focuses on engineering specific genes that would encourage the arthritic joint to produce biological molecules that fight inflammation. Another would use microscopic spheres of gelatin to control the release of protein drugs within the joint.

Even if such therapies become available, low-tech treatments such as medication and physical therapy will still play a major role in pain management.

Maintain good communication with your doctor, and ask him or her if there are any new therapies that might help you. Together, you can weigh the pros and cons and decide what the next step might be. If your pain is adequately controlled by your current treatment, there's probably no need to make a change.

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